REMARKS

In the Office Action of October 9, 2007, claims 1, 3, 4, 5, 7 and 8 were rejected under 35 U.S.C. 102(b) as allegedly being anticipated by U.S. Patent No. 5,963,656 (hereinafter "Bolle et al."). In addition, claims 2 and 6 were rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over Bolle et al. in view of U.S. Patent No. 6,263,091 (hereinafter "Jain et al.").

In response, Applicants have amended the independent claims 1 and 5 to more clearly distinguish the claimed invention from the cited reference of Bolle et al. Claims 2, 3 and 6-8 have also been amended. As amended, Applicants respectfully assert that the independent claims 1 and 5 are not anticipated by the cited reference of Bolle et al., as explained below. In view of the claim amendments and the following remarks, Applicants respectfully request that the pending claims 1-8 be allowed.

A. Patentability of Amended Independent Claims 1 and 5

As amended, the independent claim 1 recites in part "*gradients are calculated for pixels of a skin print image of the skin print images such that a gradient is calculated for each pixel of the skin print image*" and "*a mean value is derived from the gradients of the pixels in each region of the skin print image*," which are not disclosed in the cited reference of Bolle et al. Thus, Applicants respectfully assert that the amended independent claim 1 is not anticipated by the cited reference of Bolle et al., and request that the amended independent claim 1 be allowed.

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Bros. v. Union Oil of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

The cited reference of Bolle et al. discloses a system and method for determining the quality of fingerprint images in which the directional histogram, for each block, is computed based on the directions of pixels within it, as explained in column 7, lines 46-48. However, the cited reference of Bolle et al. does not disclose

calculating a gradient for each of the pixels in each block. Thus, the cited reference of Bolle et al. does not disclose "*gradients are calculated for pixels of a skin print image of the skin print images such that a gradient is calculated for each pixel of the skin print image*," as recited in the amended independent claim 1.

5

In addition, the cited reference of Bolle et al. in column 7, lines 34-36, states that "[i]f there is a block direction, i.e., a prominent direction, the direction is noted." However, a prominent direction is not a mean value, which is derived from the gradients of the pixels in the block. Thus, the cited reference of Bolle et al. does not

10   disclose "*a mean value is derived from the gradients of the pixels in each region of the skin print image*," as recited in the amended independent claim 1.

Since the cited reference of Bolle et al. does not disclose the claim limitations of "*gradients are calculated for pixels of a skin print image of the skin print images*

15   *such that a gradient is calculated for each pixel of the skin print image*" and "*a mean value is derived from the gradients of the pixels in each region of the skin print image*," the amended independent claim 1 is not anticipated by the cited reference of Bolle et al. As such, Applicants respectfully request that the amended independent claim 1 be allowed.

20

The above remarks are also applicable to the amended independent claim 5, which recites similar limitations as the amended independent claim 1. Thus, the amended independent claim 5 is also not anticipated by the cited reference of Bolle et al. As such, Applicants respectfully request that the amended independent claim 5 be

25   allowed as well.

B. Patentability of Dependent Claims 2-4 and 6-8

Each of the dependent claims 2-4 and 6-8 depends on one of the amended

30   independent claims 1 and 5. As such, these dependent claims include all the limitations of their respective base claims. Therefore, Applicants submit that these dependent claims are allowable for at least the same reasons as their respective base claims.

As an example, the dependent claim 2 recites *"characterized in that the gradients calculated initially, which have the components $g_{x(alt)}$ and $g_{y(alt)}$, are squared after the fashion of a complex number by the formulas $g_x = g_{x(alt)}^2 - g_{y(alt)}^2$ and $g_y = 2g_{x(alt)} * g_{y(alt)}$,"* which is not disclosed in the cited references of Bolle et al. and Jain et al. The Office Action on page 5 states that the cited reference of Jain et al. "teaches using gradient components in the complex domain ('Prewitt Operator', Jain Column 9 Lines 15-35), necessitating a transform similar to the Pythagorean triple represented by the formulas g.sub.x=g.sub.x(alt).sup.2-g.sub.y(alt).sup.2 and g.sub.y=2g.sub.x(alt)*g.sub.y(alt)." The operators disclosed in column 9, lines 15-35, of Jain et al. include $g_x(i, j)=g(i-1, j-1)+g(i, j-1)+g(i+1, j-1)-g(i-1, j+1)- g(i, j+1)-g(i+1, j+1)$ and $g_y(i, j)= g(i-1, j-1)+g(i-1, j)+g(i-1, j+1)-g(i+1, j-1)- g(i+1, j)-g(i+1, j+1)$. Clearly, these operators are not the same as the claimed formulas of "$g_x = g_{x(alt)}^2 - g_{y(alt)}^2$ and $g_y = 2g_{x(alt)} * g_{y(alt)}$." Thus, the cited reference of Jain et al. does not disclose the limitations of the dependent claim 2. As such, the dependent claim 2 is not obvious in view of the cited references of Bolle et al. and Jain et al.

Applicants respectfully request reconsideration of the claims in view of the remarks made herein. A notice of allowance is earnestly solicited.

Respectfully submitted,

Scholze et al.

Date: January 8, 2008

By: /thomas h. ham/
Thomas H. Ham
Registration No. 43,654
Telephone: (925) 249-1300